

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated May 5, 2006 has been received and its contents carefully reviewed.

Claims 9, 10, 23, 26, 28, 41, and 46 have been amended, claims 43 and 44 have been cancelled. No new matter has been added. Claims 1-42, and 45-46 are currently pending of which claims 31-40 have been withdrawn. Applicant respectfully requests reconsideration of the pending non-withdrawn claims.

The Office Action objected to claim 41 because of a typographical error. Claim 41 has been amended to correct the typographical error and clarify the language therein. Thus, the Applicant requests that the objection be withdrawn.

The Office Action rejects claims 9-11, 16, 19-22, 26-30, and 41-45 under 35 U.S.C. 112, second paragraph, as being indefinite.

Specifically, the Office Action states that the term “substantially” makes the language unclear in claims 9, 10, 21-22, 26, and 41. Claims 43 and 44 have been cancelled, accordingly, the rejection with respect to these two claims is now moot. Claims 9, and 10 have been amended to clarify the language therein. However, with respect to claims 11, 22, 26-30, 41, and 45, Applicant respectfully traverses the rejection. As indicated in M.P.E.P. 2173.05(b)(D), the term “substantially” is a definite term that is often used in conjunction with another term to describe a particular characteristic. *Id.* This is exactly how the term is used in claims 11, 22, 26-30, 41, and 45. Accordingly, the term “substantially” does not render these claims indefinite.

The Office Action also rejects claims 16, 19, 21, and 20 as being indefinite stating that it is unclear whether the anode and cathode are required to be transparent when they comprise a

transparent material, or opaque when they comprise an opaque material. Applicant respectfully traverses this rejection. The language is not indefinite. The claim language clearly requires that the anode and cathode at least in part comprise material that is transparent or opaque. Accordingly, these claims are definite.

For at least the aforementioned reasons, the Applicant requests that the Examiner withdraw the rejection of claims 9-11, 16, 19-22, 26-30 and 41-45 under 35 USC § 112, second paragraph.

Finally, the Office Action rejects claim 42 as being indefinite because it is allegedly unclear whether the anode and cathode comprise more than one type of material. Applicants respectfully traverse this rejection. Nothing in claim 42, or any of the claims from which claim 42 depends, limits the anode and cathode to a single type of material. Claim 42 merely requires that at least one material in the anode be the same as at least one material in the cathode. Accordingly, claim 42 is definite, and Applicants respectfully request withdrawal of this rejection.

The Office Action also rejects claims 1, 2, 10, 12 13, 15-17, 19-23, and 25 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,436,559 B1 to Ueno et al. ("Ueno") as evidenced by U.S. Patent No. 4,769,292 to Tang et al. ("Tang"). Applicants traverse this rejection.

To be anticipatory, a reference must teach each and every element of the claimed invention. Ueno at least fails to teach "the anode comprising a material having a work function not greater than about 4.5 eV" as recited in claim 1. Thus, Ueno cannot anticipate claim 1.

According to the Office Action, Ueno does not explicitly disclose the above identified feature of claim 1. Instead, the Office Action relies on the fact that Ueno uses transparent ITO for the anode. *See Office Action p. 4.* The Office Action also relies on Tang, which shows that

elemental indium and elemental tin have work function lower than 4.5 eV. The Office Action then concludes that the ITO anode in Ueno must have a work function lower than 4.5 eV. This is an erroneous conclusion because ITO is not elemental indium or elemental tin, and does not, therefore, exhibit the same properties as elemental indium and elemental tin. In fact, ITO has a work function of 4.7 eV as shown in the article by Cui et al. ("Indium Tin Oxide Alternatives – High Work Function Transparent Conducting Oxides as Anodes for Organic Light-Emitting Diodes"), submitted in the Information Disclosure Statement filed concurrently with this response.

As such, Ueno, even as evidenced by Tang, cannot anticipate claim 1. Claims 2, 10, 12, 13, 15-17, 19-23, and 25, depend directly or indirectly on claim 1, and thus are patentable over Ueno as evidenced by Tang, at least for the same reasons as claim 1. Accordingly, Applicant respectfully requests withdrawal of this rejection.

The Office Action also rejects claims 1-10, 12-17, and 25 under 35 U.S.C. 102(b) as being anticipated by WO 01/49806 A1 to Son et al. ("Son") as evidenced by U.S. Patent No. 4,769,292 to Tang et al. ("Tang"). Applicants respectfully traverse this rejection.

Son also does not anticipate claim 1 because it also fails to at least teach "the anode comprising a material having a work function not greater than about 4.5 eV." Like Ueno, Son also teaches forming an anode using ITO. *See Office Action* p. 6. Similar to the previous rejection based on Ueno, the Office Action relies on the teachings in Tang to evidence that ITO has a work function not greater than about 4.5 eV. However, as discussed above, this reliance on Tang is misplaced because it leads to an erroneous conclusion. Accordingly, Son fails to teach all the elements of claim 1 even as evidenced by Tang. For these reasons, claim 1 is also patentable over Son. Claims 2-10, 12-17, and 25, depend directly or indirectly on claim 1, and

thus are patentable over Son at least for the same reasons as claim 1. As such, Applicant respectfully requests withdrawal of this rejection.

The Office Action also rejects claims 41, 42, and 45 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,457,565 to Namiki et al. ("Namiki"). Claim 41 has been amended to depend on claim 1, and Namiki fails to teach all of the elements of claim 1. Accordingly, claim 41 is patentable over Namiki at least for the same reasons as claim 1. Claims 42 and 45 depend on claim 41 and thus are also patentable over Namiki for at least the same reasons. Accordingly, Applicants respectfully request withdrawal of this rejection.

The Office Action also rejects claim 46 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,294,810 to Egusa et al. ("Egusa"). Claim 46 has also been amended to depend on claim 1. Like Namiki, Egusa fails to teach all of the elements of claim 1. Accordingly, claim 46 is patentable over Egusa at least for the same reasons as claim 1. As such, Applicant respectfully requests withdrawal of this rejection.

The Office Action also rejects claim 46 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,963,081 B2 to Gupta et al. ("Gupta"). As discussed with respect to Egusa, Gupta cannot anticipate claim 46, at least because claim 46 has been amended to depend on claim 1 and Gupta does not disclose all of the elements of claim 1. Applicant respectfully requests withdrawal of this rejection.

The Office Action also rejects claims 1-30, and 41-45 under 35 U.S.C. 103(a) as being unpatentable over WO 01/49806 A1 to Son et al. ("Son") in view of U.S. Patent No. 4,769,292 to Tang et al. ("Tang"). The Applicant traverse this rejection.

In order to render a claimed invention obvious, the references alone or in combination, must teach or suggest each and every element of the claims. As discussed previously, neither Son nor Tang teach "the anode comprising a material having a work function not greater than

about 4.5 eV” as recited by claim 1. Accordingly, Son and Tang cannot render claim 1 obvious either alone or in combination. Claims 2-30, 42 and 45, variously depend on claim 1, and thus are patentable over Son in view of Tang at least for the same reasons as claim 1. In light of the above, Applicant respectfully requests withdrawal of this rejection.

Finally, the Office Action rejects claims 1-30, and 41-45 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16, and 21-28 of U.S. Patent No. 6,720,573 B2 (“the ‘573 Patent”) in view of U.S. Patent No. 4,769,292 to Tang et al. (“Tang”). A nonstatutory obviousness-type double patenting rejection may be overcome by filing a Terminal Disclaimer. Applicants are filing a Terminal Disclaimer concurrently with this response. Accordingly, Applicants respectfully request withdrawal of this rejection.

The application is in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911.

Application No.: 10/722,812
Amdt. dated November 3, 2006
Reply to Office Action dated May 5, 2006

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Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

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